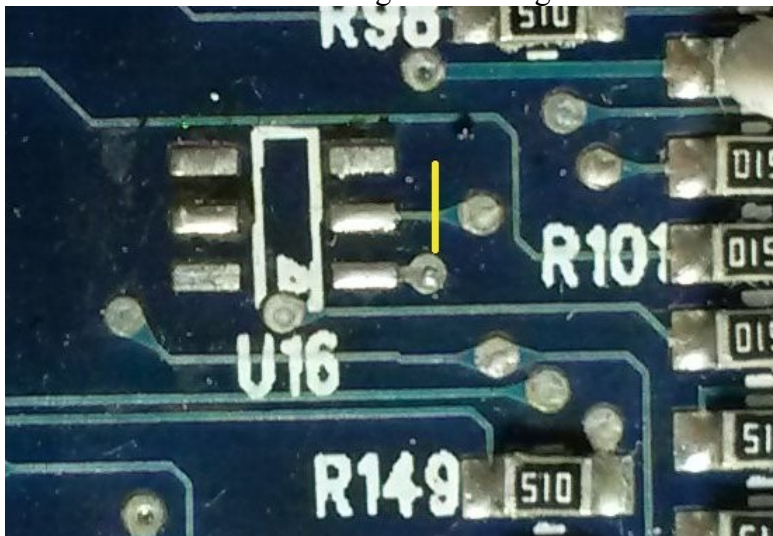


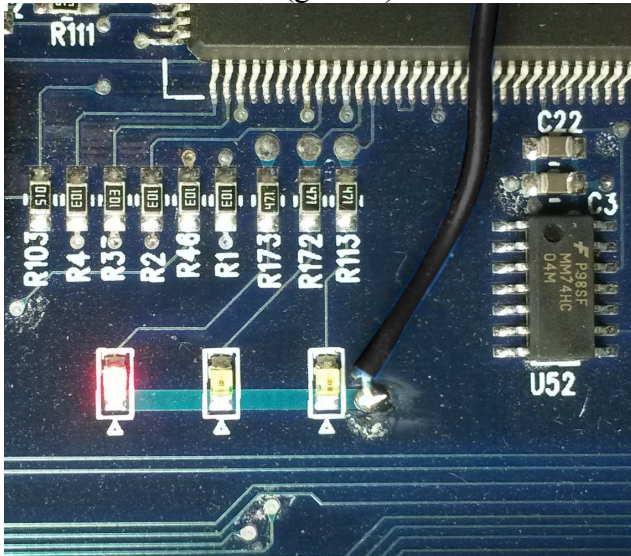
A photograph of a coiled cable with a black connector and red, black, and white wires. The cable is laid out on a light-colored, textured surface. The connector is a black, rectangular plug with a small tab. The wires are red, black, and white, and are bundled together. The cable is coiled into a loose loop.

- (1) Use a fine soldering tip! Pencil style is good.
- (2) Do not use too high a temperature - 350°C is enough.
At higher temperatures, the wire insulation will shrink away, and you might damage traces and components on the board.
- (3) Use soldering wire containing lead! The classic 60/40 alloy is best. This is an old board, you will get no good result using the modern lead free wire. Which sucks for manual soldering, anyway.
- (4) Be careful regarding electrostatic discharge - ground the brainboard, the soldering iron and yourself carefully before touching the board!

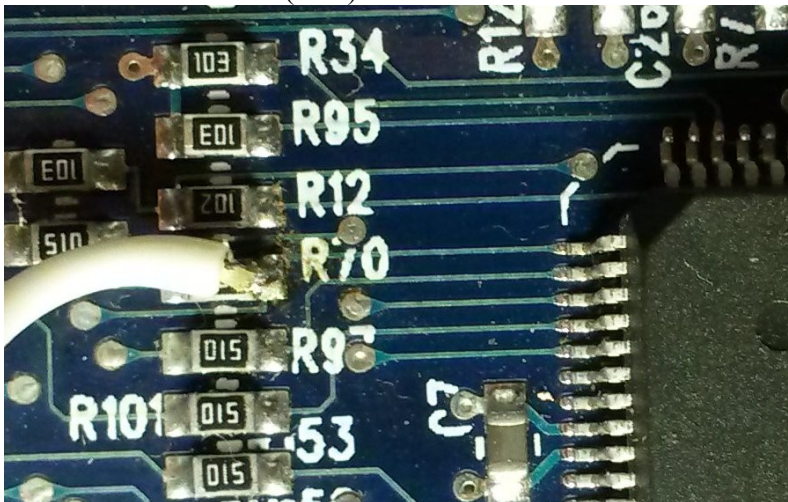
- (1) Locate **U16** between the ROM and the big square chip U25. Cut the trace as indicated by the yellow line in the image below.
Use a stanley knife to do this. It is best to make two cuts a fracture of a millimeter apart and take out the copper between.
Note that U16 itself is missing in this image because I removed it for testing.



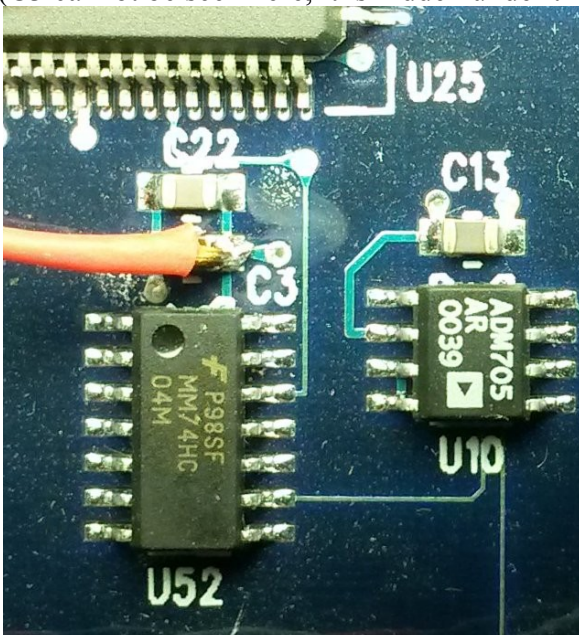
(2) Solder the **black** wire (ground) to the trace near the LEDs:



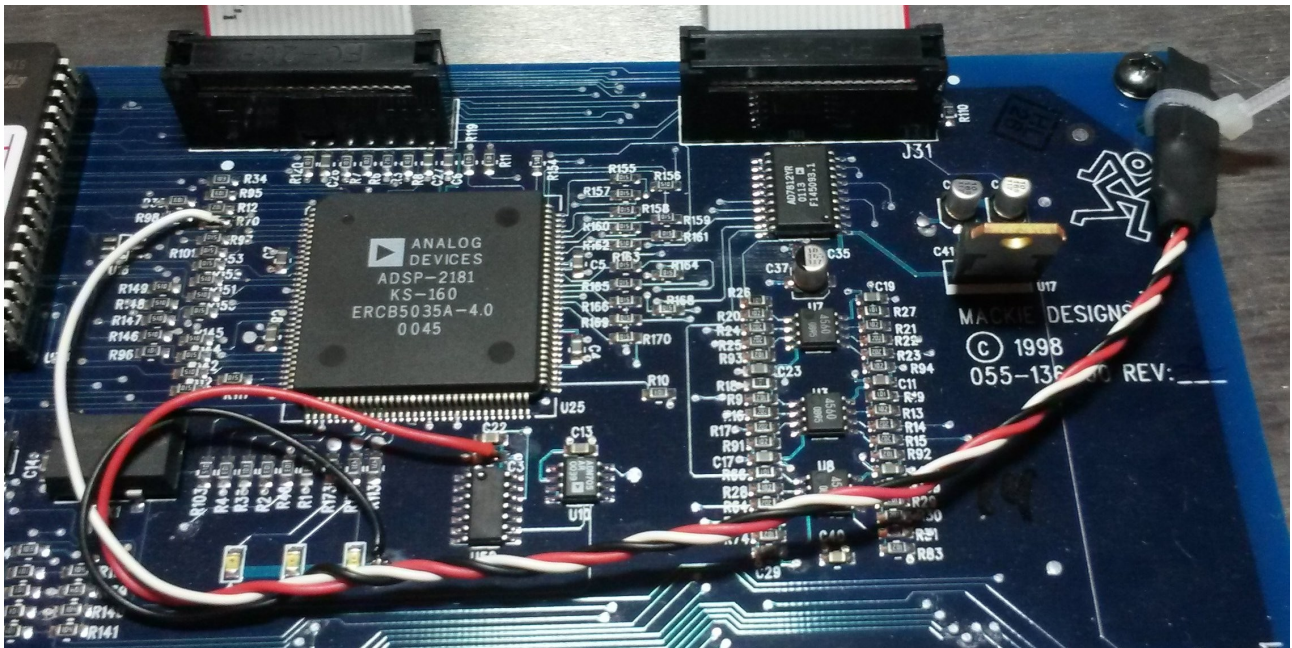
(3) Solder the **white** wire (data) to R70 as shown below:



(4) Solder the **red** wire (+5V) to the right side of C3
(C3 cannot be seen here, it is hidden under the wire)



(5) **Fix the chip** to some convenient point with a cable tie



(6) Enjoy!